

DOH-Hillsborough County COVID-19 Surveillance Report

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SUMMARY: Over the past week (12/13 – 12/19), 4,452 COVID cases were identified in Hillsborough County, an increase of 9.7% from 4,036 during the previous week. The 7-day moving **average of cases per day (636) increased** and rolling **percent positivity (9.5%) increased** from the previous week. Case rates are increasing across almost every age group and case rates are highest in the **45-54** age group. Rates increased in all race/ethnicities during week 49, and **case rate was highest in Hispanics**. Case rates are also **increasing Statewide and in Pinellas and Pasco Counties**. During the past week, **testing volume has remained consistent**. **Pinellas County is experiencing higher testing rates** compared to Pasco and Hillsborough. We are seeing delays in the turnaround time for the reporting some antigen testing results. This appears to be occurring because historical results are being reported as facilities are beginning to electronically report results, but overall turn-around time remains under 2 days for PCR tests. Hillsborough County **hospitalizations for COVID continue to increase** and are now averaging 311 total COVID inpatients a day, up 16% from last week.

INFLUENZA/RESPIRATORY SURVEILLANCE: Influenza activity remains extremely low throughout Hillsborough County and the State. No outbreaks of Influenza or other respiratory pathogens have been reported this influenza season. Very few positive influenza labs have been received and no pediatric mortalities have been reported. Additional information and data about influenza surveillance is available at: <http://www.floridahealth.gov/diseases-and-conditions/influenza/>

Fig 1. Daily New COVID cases and percent positivity trends in Hillsborough County Residents. The **7-day moving average for percent positivity increased** and is now **9.5%**. The **7-day average number of new cases per day (636)** has been at as steady increase over the last couple weeks. Hillsborough County has reported 70,027 cases to date.

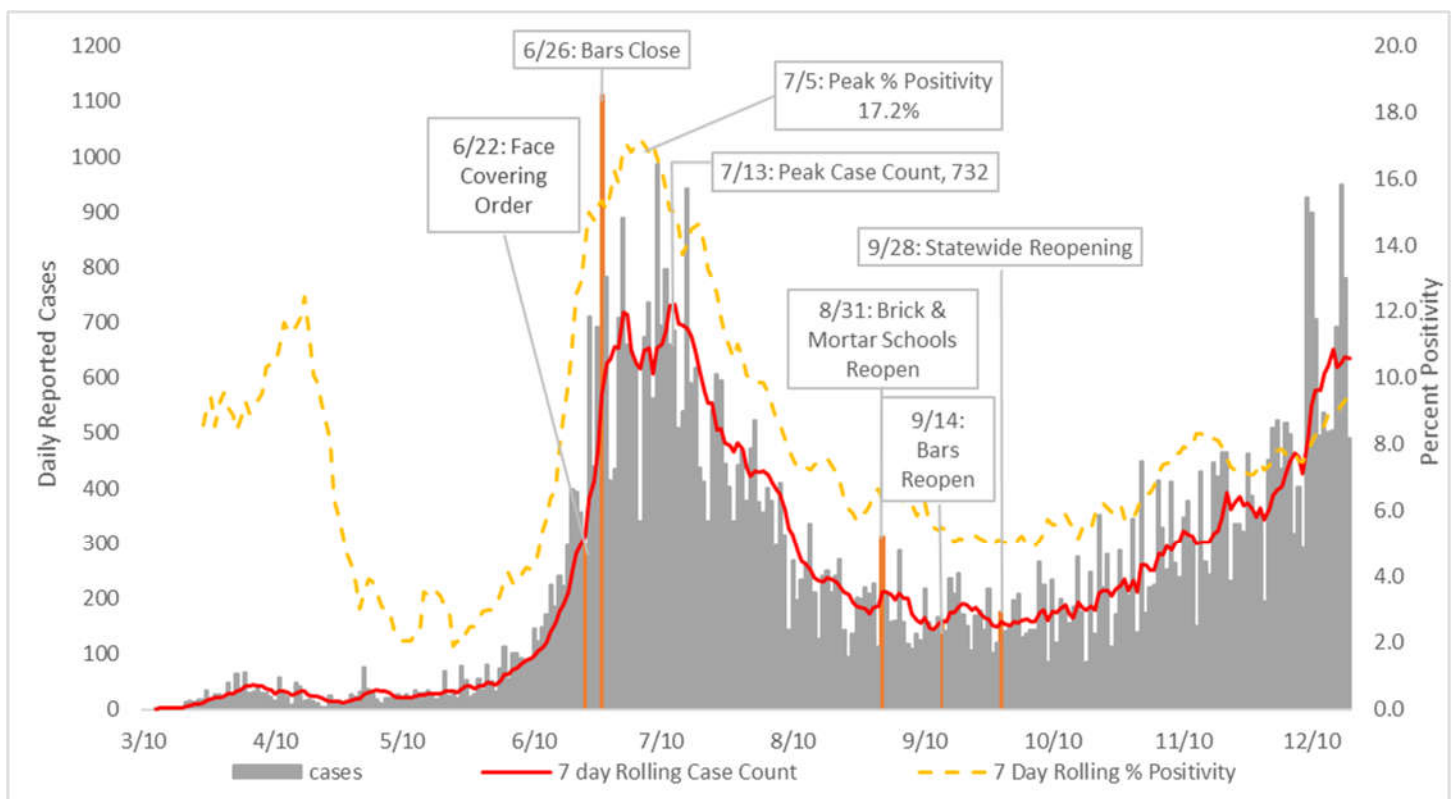
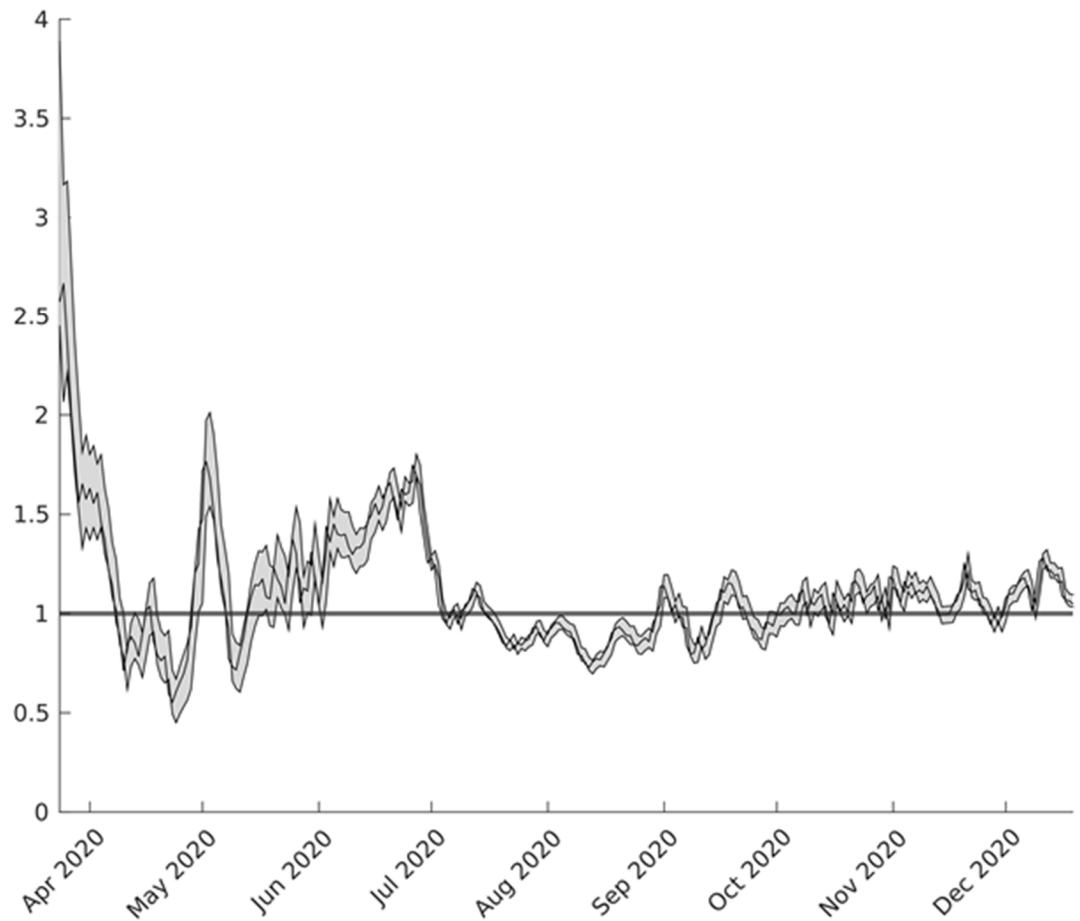


Fig 2 (right). R_t estimate for Hillsborough County. R_t value is calculated based on new case rates (incidence). The **current estimate of R_t for Hillsborough County is 1.05 (90% CL= 1.01- 1.07).** The R_t value is below last week – 1.22 (90% CL= 1.18 - 1.26). An R_t above 1.0 means the outbreak is growing – or viewed another way, one person is infecting more than one additional person – and R_t below 1.0 means that outbreak is shrinking.



CASES, CASE RATES AND GROUP SETTINGS

Fig 3. Comparison of COVID 7-day average case rate per 100,000 population for Pinellas, Pasco and Hillsborough Counties and the State of Florida for the past 90 days. All three **Tampa Bay Area counties saw small increases in rates** over the past week. The **Florida case rate also increased** and is now 49.6 cases per 100,000.

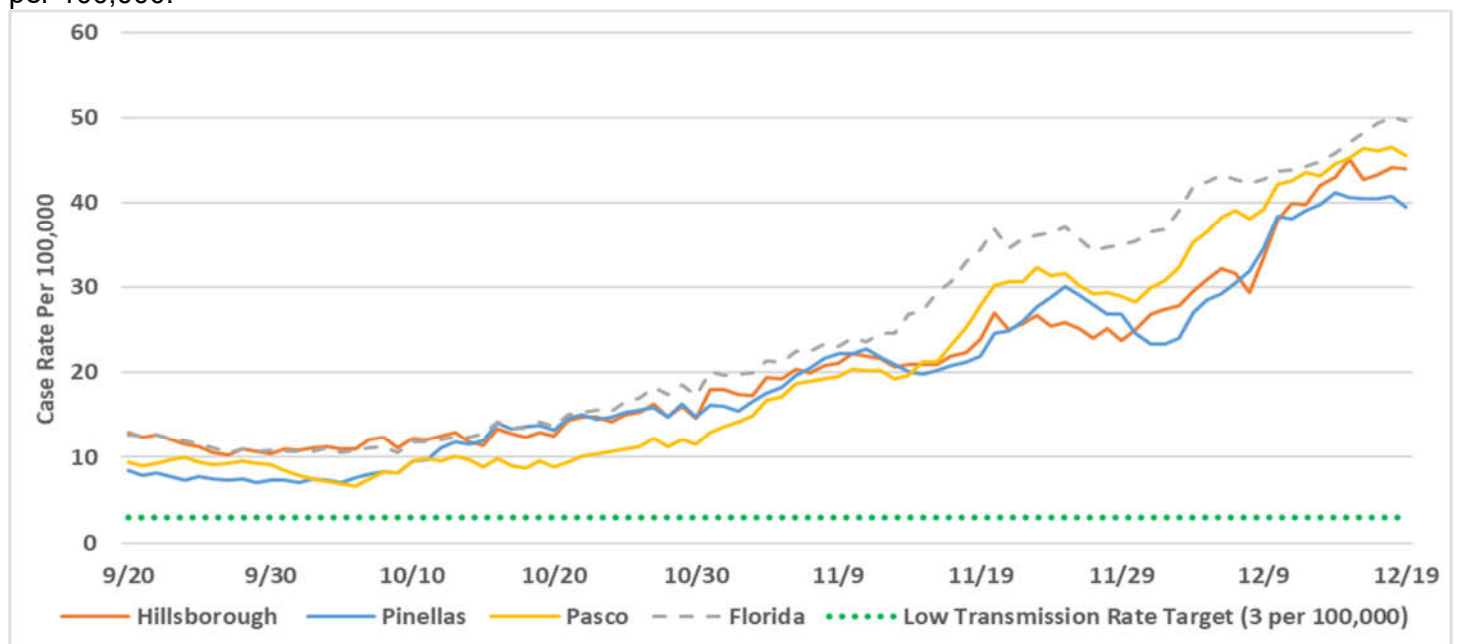


Fig 4. Comparison of COVID 7-day average case rate per 100,000 population by race and ethnicity for the past 90 days in Hillsborough County. Population data was acquired from FLHealth CHARTS. Cases with unknown race or ethnicity are excluded. Rates are increasing for most race and ethnicities, but **rates continue to remain highest among Hispanics.**

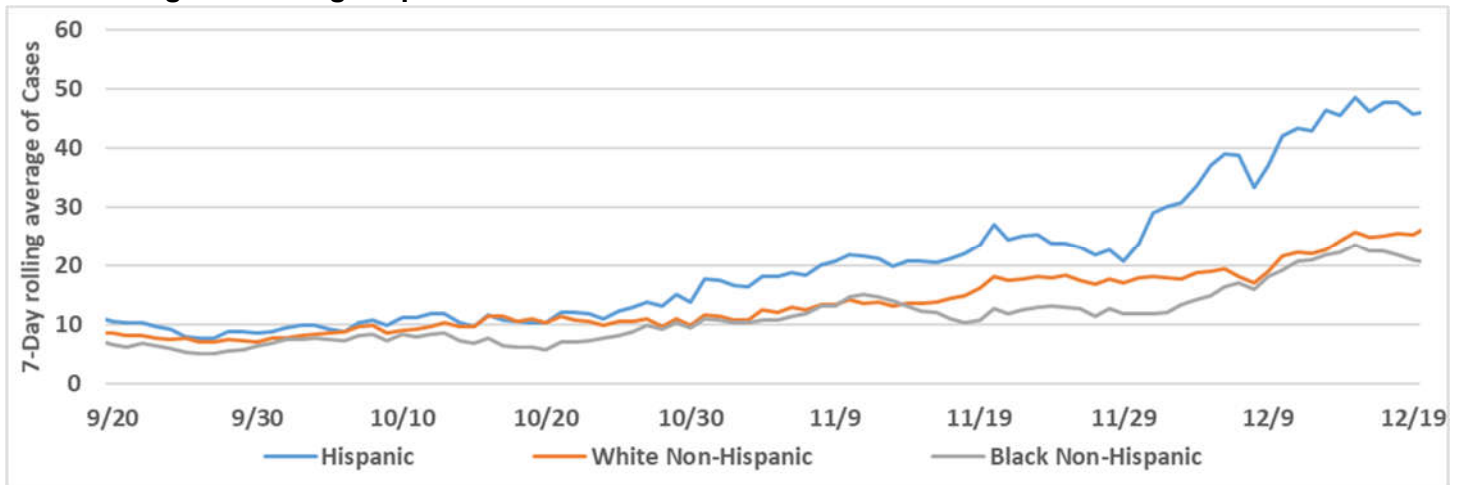


Fig 5. COVID 7-day average case rates per 100,000 population by age group for the past 90 days in Hillsborough County. **Rates have continued with their increasing trend for most age groups**, except for the 0-24 age group that saw a slight decrease in case rate. **This past week, the 45-54 age group had the highest case rate.**

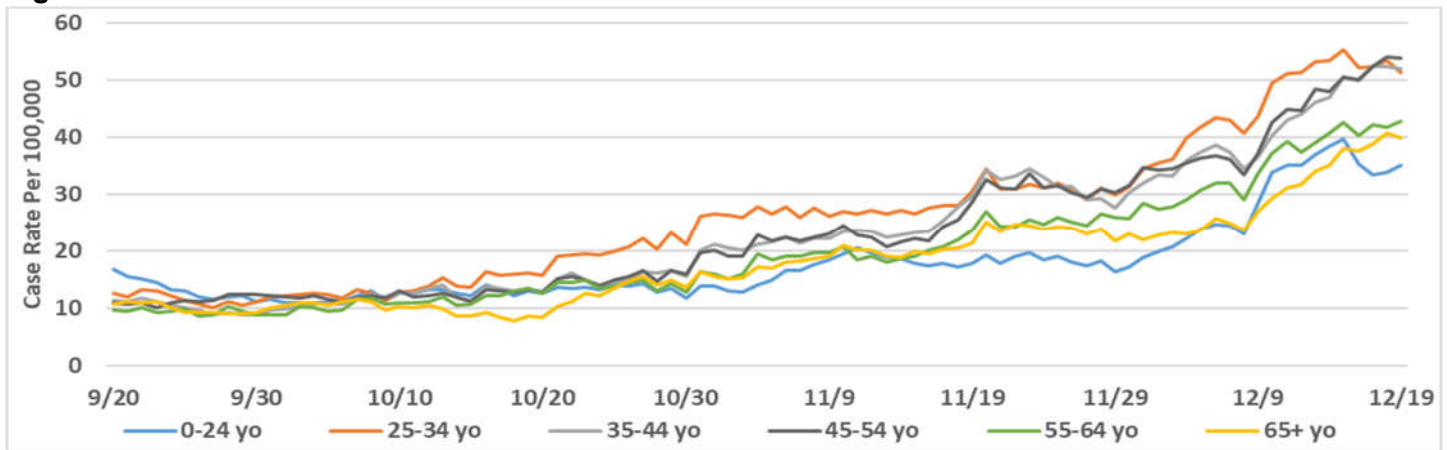


Fig 6. The 0-24 yo age group from Fig 5 (above), broken out into Preschool aged (0-4 yo), Elementary aged (5-10 yo), Middle/High School aged (11-17 yo) and College aged (18-24 yo). COVID pediatric and college-aged case rates per 100,000 population by age group, over the past 90 days in Hillsborough County. **Rates continue to remain highest in college aged cases but case increased most in the 0-4 age group.**

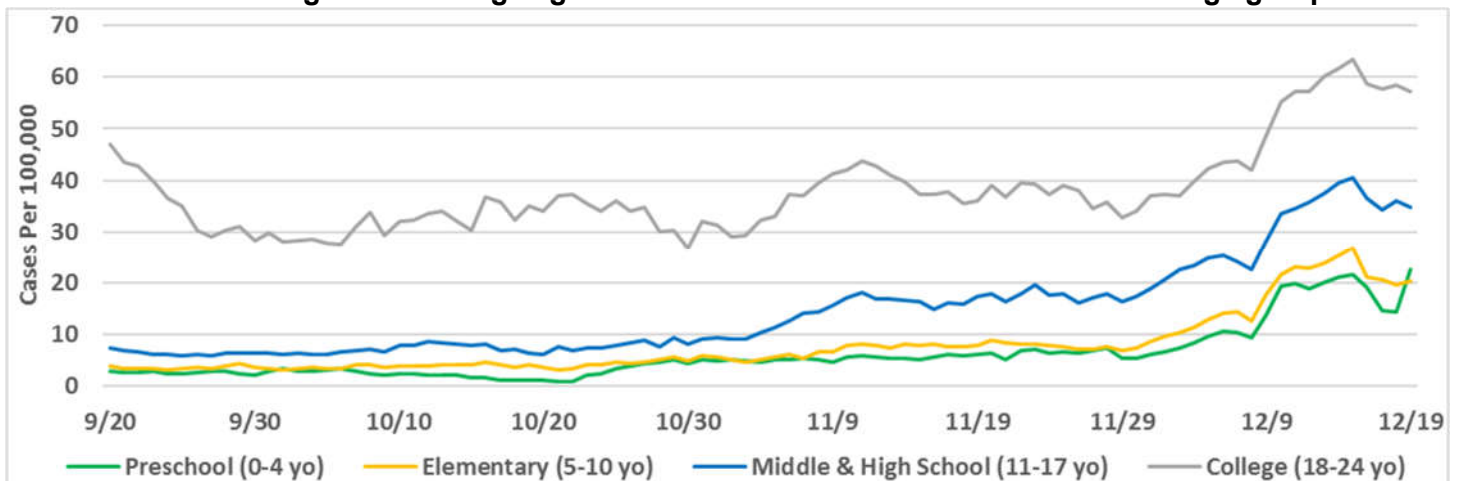


Fig 7. (right) Weekly reported COVID cases associated with **students and staff at K-12 schools** in Hillsborough County. COVID case must have been on campus during exposure period or infectious period to be counted. The weekly total number of cases decreased from last week but **remains elevated since the return from Thanksgiving break** (4 weeks ago). The majority of cases are associated with family gatherings, travel and extra-curricular activities.

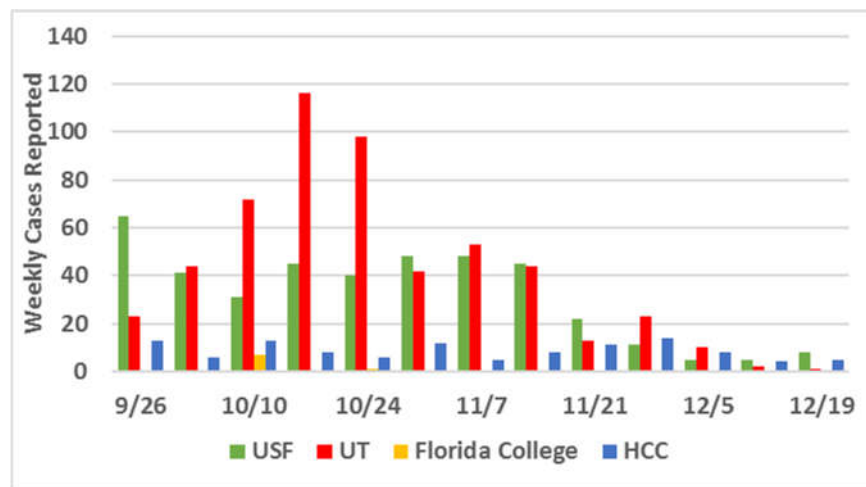
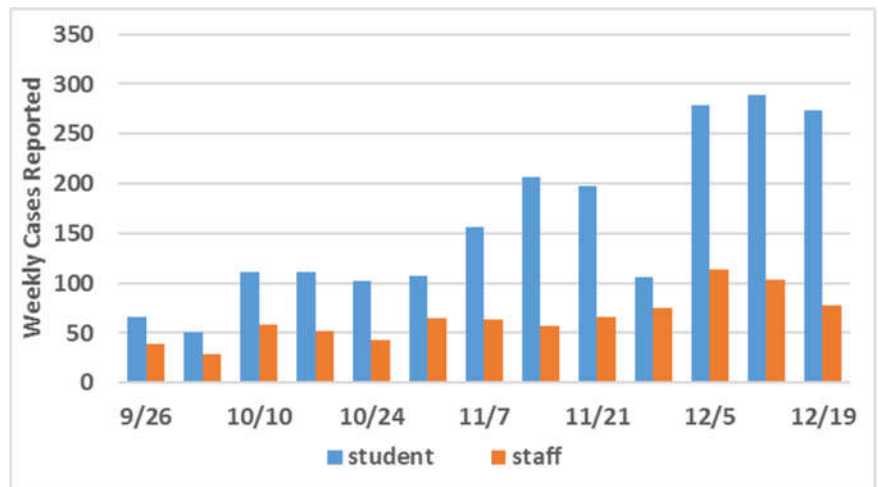


Fig 8. (left) Weekly reported COVID cases associated with **college students and staff** by reporting week. COVID case must have been on campus during exposure period or infectious period to be counted. All local campuses – except HCC - are doing only online learning and most have finished for the fall semester and have had limited numbers of students on campus since the Thanksgiving holiday. Low numbers of total on campus cases were identified but **increased this past week**.

Fig 9. Daily COVID cases associated with **LTCF residents and staff** for the past 90 days in Hillsborough County. COVID case must have been on LTCF site during exposure period or infectious period to be counted. **Cases among residents increased this past week** as cases among staff remained stable overall.

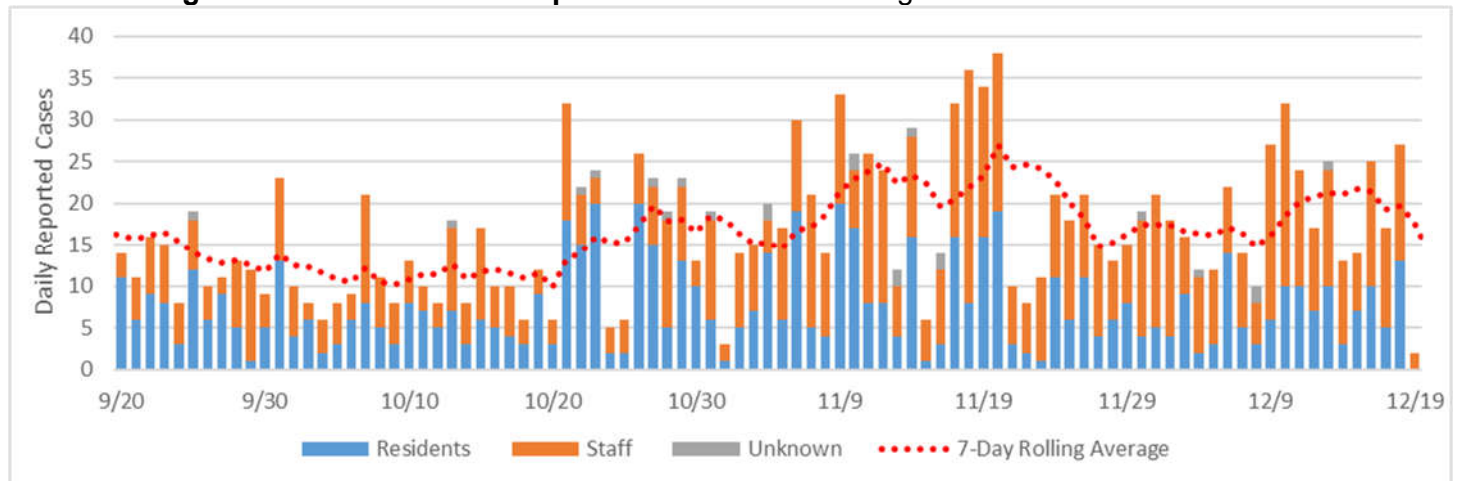
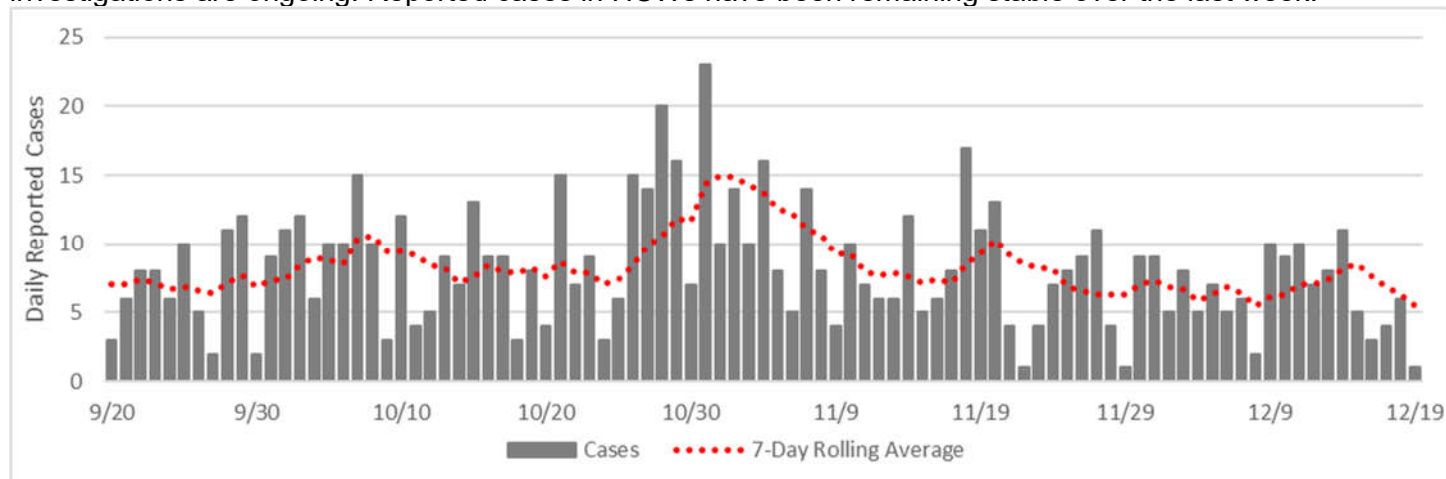


Fig. 10. COVID cases in **Health Care Workers (HCW)** for the past 90 days. To collect case occupation a case interview is required with the case, therefore the past week has missing/incomplete data, as case investigations are ongoing. Reported cases in HCWs have been remaining stable over the last week.



TESTING VOLUME, TURN-AROUND TIME AND PERCENT POSITIVITY

Fig 11. Reported COVID testing volume for Hillsborough County residents for the past 90 days. Tests are not de-duplicated by person or day; therefore, one person can have multiple tests counted across multiple days. Antigen testing continues to increase in volume but **overall testing volume decreased slightly during the past week.**

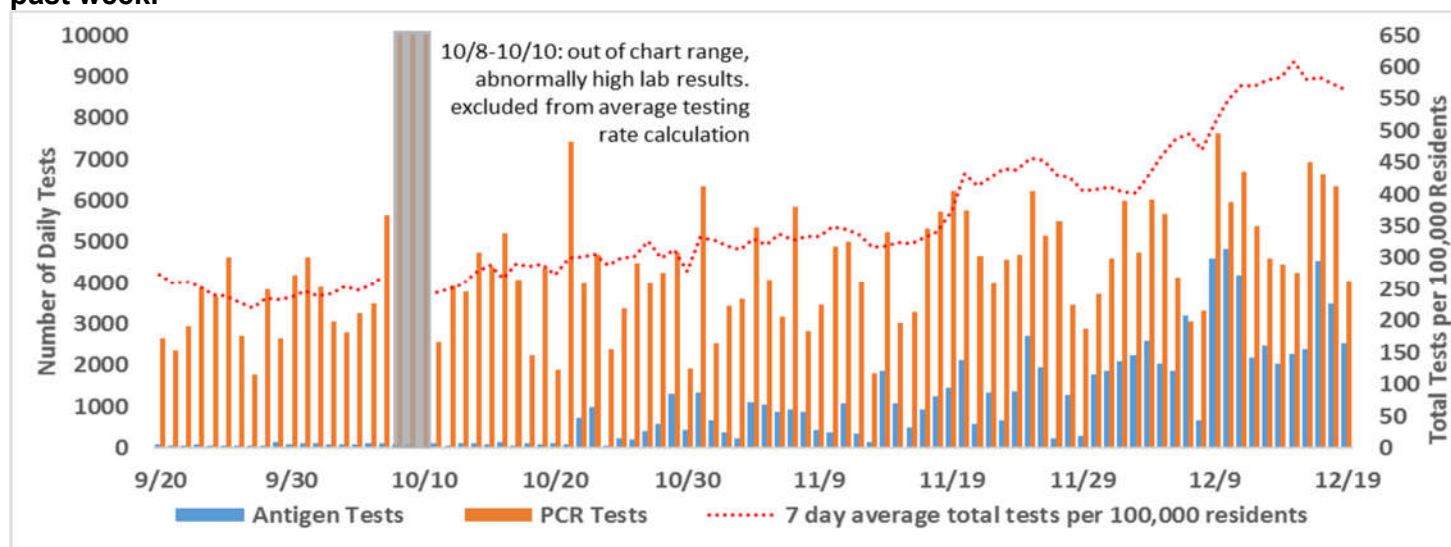


Fig 11B. NEW for week 51: Reported COVID 7-day average testing rate per 100,000 population for Pinellas, Pasco, and Hillsborough Counties for the past 90 days. Tests are not de-duplicated by person; therefore, one person can have multiple tests counted across multiple days. Testing rate has slowly increased in all counties, **testing rate continues to be highest in Pinellas County.**

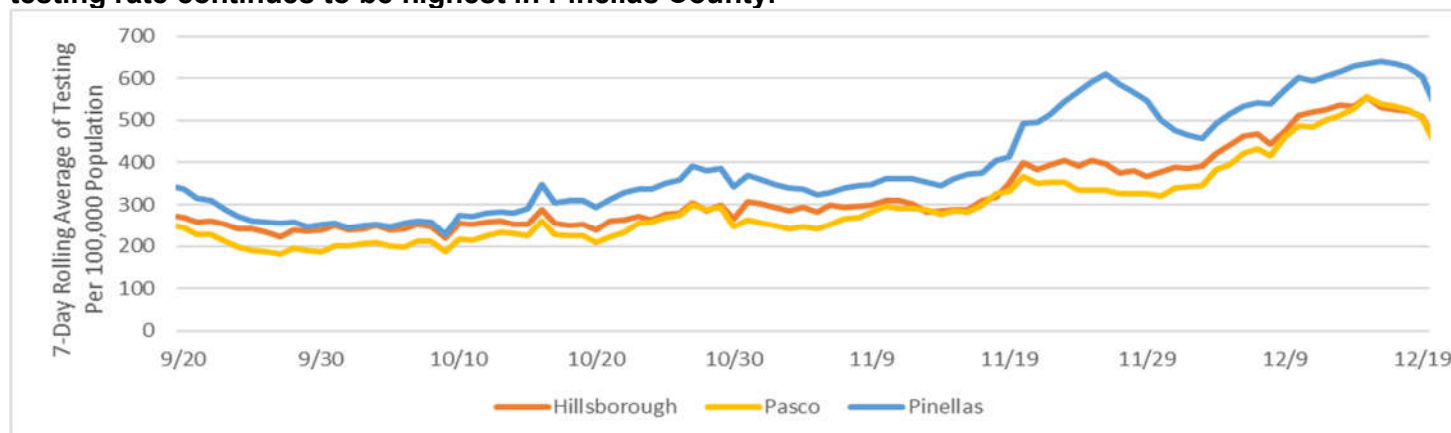


Fig 12. Average COVID testing turn-around-time (TAT) from specimen collection until results reported to DOH for the past 90 days. We are seeing delays in the turnaround time for the reporting of antigen testing results from a few facilities. When these results are filtered out of the analysis for the past month (dashed line), average TAT for antigen tests is generally less than one day. **PCR test average TAT remains around 2 days.**

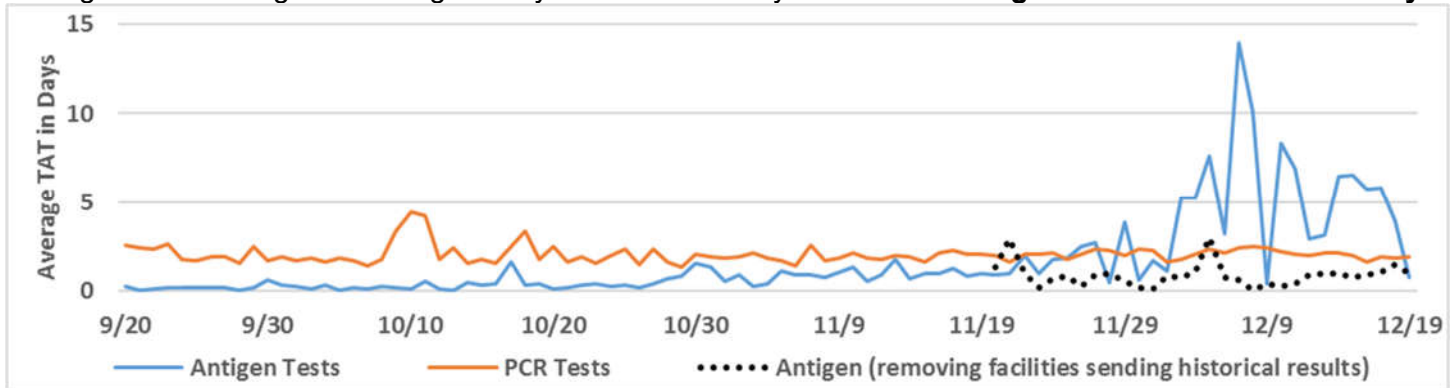


Fig 13. COVID testing percent positivity by age group for the past 90 days on a weekly average, based on Merlin case data for Hillsborough County. Percent positivity was calculated by the date a lab was created that week for a positive COVID case divided by the total number of people tested that week. Decreasing percent positivity is indicating that fewer people tested positive, therefore the lower the percent positivity value the better, which is represented in green. Higher percent positivity values are represented in red. **Percent positivity has increased across every age group this past week, and rates are highest in the 45-54 age group.**

| | 9/26 | 10/3 | 10/10 | 10/17 | 10/24 | 10/31 | 11/7 | 11/14 | 11/21 | 11/28 | 12/5 | 12/12 | 12/19 |
|-------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 0-4 years | 3.5% | 4.3% | 3.2% | 1.9% | 2.8% | 5.5% | 5.7% | 5.5% | 4.1% | 6.9% | 6.9% | 6.6% | 8.1% |
| 5-14 years | 4.5% | 6.1% | 6.0% | 6.5% | 6.8% | 8.0% | 8.2% | 10.4% | 7.9% | 8.5% | 9.2% | 9.0% | 9.3% |
| 15-24 years | 10.1% | 9.2% | 10.1% | 10.3% | 9.7% | 8.8% | 10.6% | 12.2% | 8.7% | 7.6% | 8.4% | 9.5% | 10.3% |
| 25-34 years | 4.4% | 4.8% | 4.9% | 5.9% | 6.6% | 7.7% | 8.0% | 8.8% | 7.8% | 6.8% | 8.4% | 9.0% | 9.4% |
| 35-44 years | 4.4% | 4.5% | 4.9% | 5.5% | 5.5% | 6.9% | 7.5% | 8.4% | 8.7% | 7.8% | 8.5% | 8.5% | 10.0% |
| 45-54 years | 4.8% | 5.1% | 4.9% | 5.0% | 5.4% | 6.7% | 7.7% | 7.8% | 8.6% | 8.7% | 8.6% | 9.2% | 11.4% |
| 55-64 years | 3.6% | 3.9% | 4.0% | 4.4% | 4.7% | 5.0% | 6.3% | 6.3% | 6.0% | 7.0% | 7.1% | 7.6% | 9.0% |
| 65-74 years | 3.2% | 4.1% | 3.8% | 3.1% | 4.4% | 4.3% | 5.9% | 5.9% | 5.6% | 7.1% | 6.0% | 7.1% | 9.0% |
| 75-84 years | 3.9% | 3.8% | 3.7% | 2.7% | 3.5% | 4.5% | 6.5% | 6.8% | 5.9% | 6.9% | 5.8% | 6.4% | 8.2% |
| 85+ years | 5.2% | 4.1% | 2.3% | 3.4% | 4.8% | 4.2% | 5.1% | 5.0% | 2.9% | 3.6% | 2.9% | 4.8% | 5.8% |

Fig 13B. NEW for week 51: COVID testing rate by age group, per 100,000 population for the past 90 days on a weekly average, based on Merlin case data for Hillsborough County. Testing rates indicate how many people in that specific age group for Hillsborough County are being tested to identify cases within the community. The higher the testing rate the better, indicated in green. The lower the testing rate is indicated in red. **Testing rate is highest in the 85+ age group, and lowest in the 5-14 and 0-4 age groups.**

| | 9/26 | 10/3 | 10/10 | 10/17 | 10/24 | 10/31 | 11/7 | 11/14 | 11/21 | 11/28 | 12/5 | 12/12 | 12/19 |
|-------------|------|------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|
| 0-4 years | 82 | 71 | 76 | 66 | 85 | 94 | 95 | 93 | 124 | 106 | 136 | 289 | 277 |
| 5-14 years | 82 | 71 | 84 | 74 | 81 | 90 | 96 | 95 | 137 | 122 | 175 | 288 | 256 |
| 15-24 years | 244 | 233 | 250 | 266 | 270 | 284 | 291 | 276 | 355 | 414 | 458 | 553 | 513 |
| 25-34 years | 245 | 257 | 263 | 270 | 292 | 339 | 325 | 308 | 394 | 460 | 498 | 566 | 548 |
| 35-44 years | 223 | 230 | 258 | 245 | 257 | 293 | 285 | 271 | 375 | 375 | 440 | 519 | 521 |
| 45-54 years | 235 | 234 | 264 | 259 | 257 | 294 | 283 | 275 | 363 | 356 | 425 | 487 | 474 |
| 55-64 years | 244 | 264 | 278 | 281 | 288 | 324 | 302 | 298 | 404 | 379 | 429 | 492 | 476 |
| 65-74 years | 227 | 238 | 265 | 242 | 262 | 334 | 275 | 270 | 379 | 332 | 371 | 435 | 432 |
| 75-84 years | 252 | 294 | 303 | 282 | 300 | 418 | 322 | 321 | 465 | 385 | 452 | 484 | 491 |
| 85+ years | 344 | 411 | 397 | 420 | 398 | 494 | 426 | 537 | 856 | 562 | 815 | 833 | 760 |

HOSPITALIZATIONS AND HOSPITALIZATION RATE

Fig 14. COVID admits and inpatients in Non-ICU and ICU beds in Hillsborough County, based on the AHCA ESS Report. Hillsborough County **hospitalizations for COVID continue to increase** and are now averaging 311 total COVID inpatients a day, up 16% from last week. Daily COVID admits have averaged 42/day this past week.

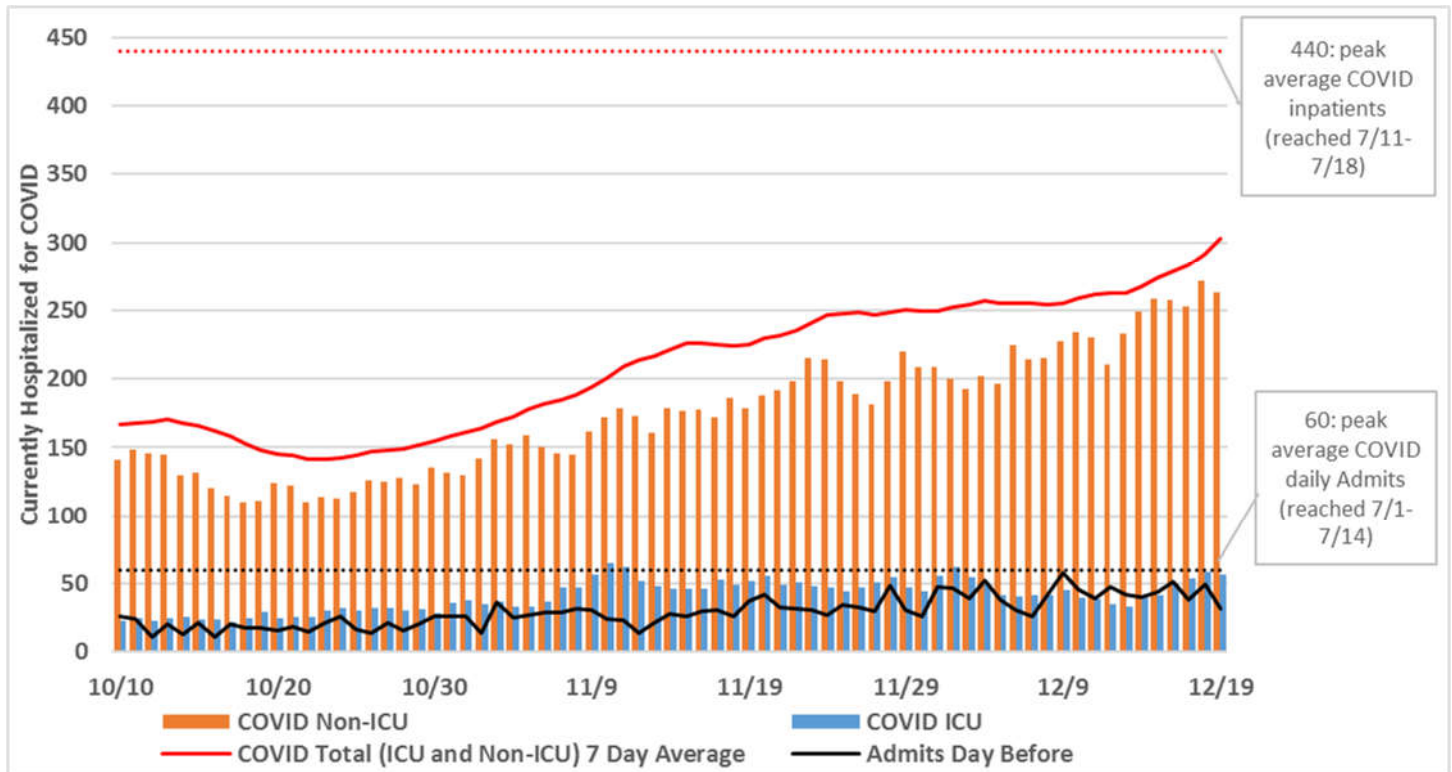


Fig 15. Percentage of Hospital and ICU beds occupied in Hillsborough County, based on AHCA ESS Report. Occupied beds remained at 80% for ICU beds and around 73% in Non-ICU beds.

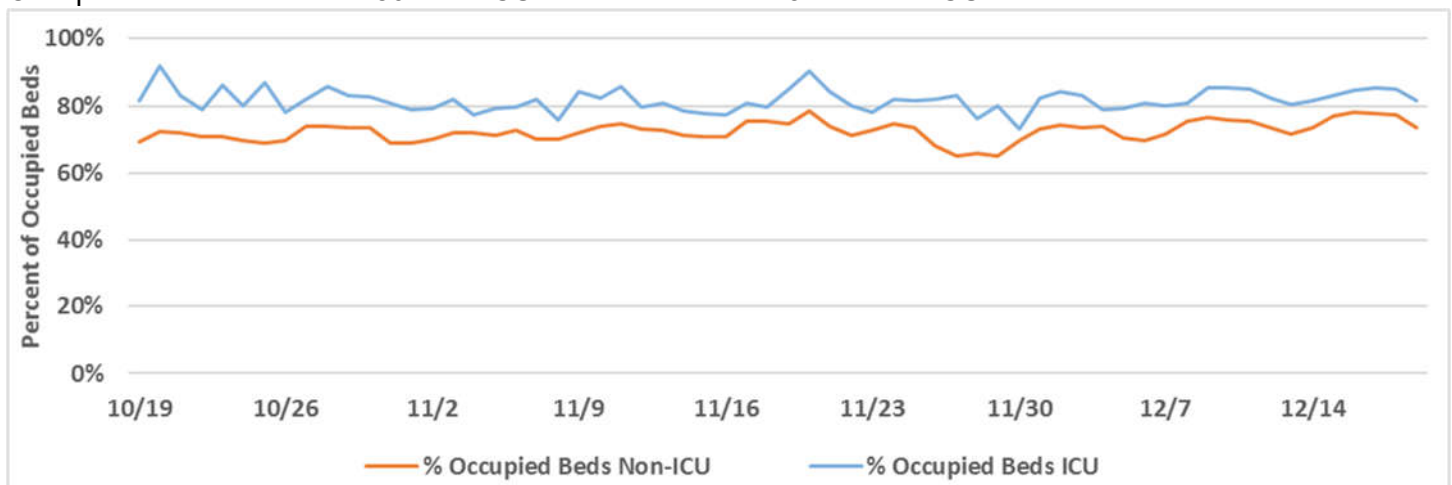


Fig 16. COVID Hospitalization rate per 100,000 by Race/ethnicity, over the past 90 days, based on Merlin case data. Cases with unknown race/ethnicity are excluded. Population data was acquired from FLHealth CHARTS. To collect case hospitalization a case investigation and/or interview is required with the case, therefore the past week has missing/incomplete data as case investigations are ongoing. Over the past week, **Hospitalization rates were highest in Black Non-Hispanic and White Non-Hispanic cases. Hispanic cases saw a decrease in hospitalization rates.**

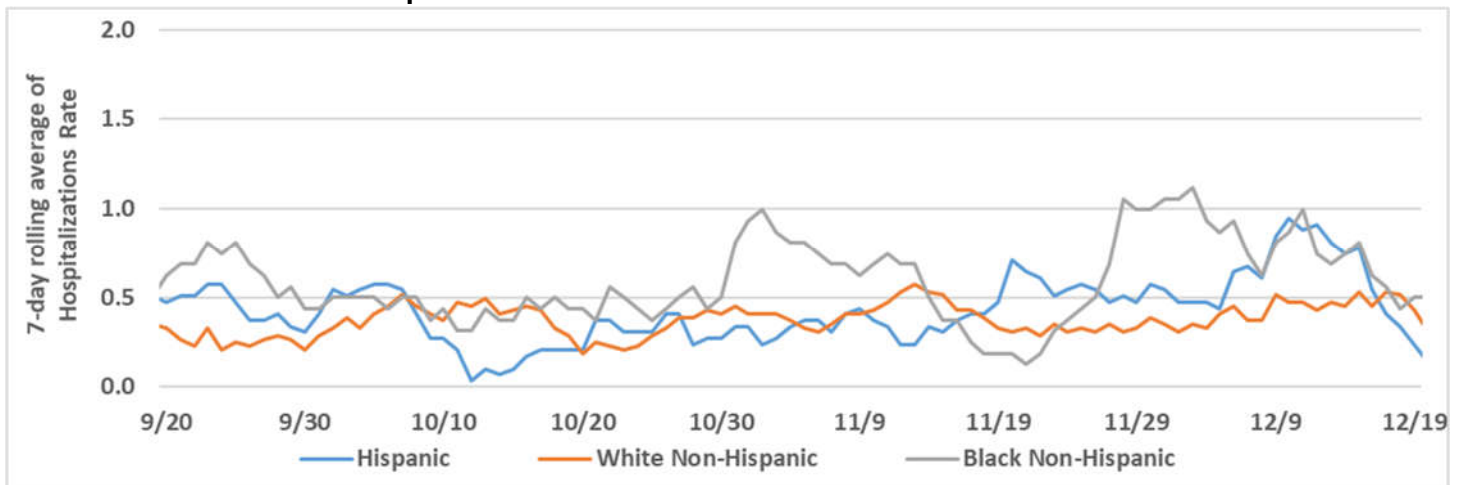
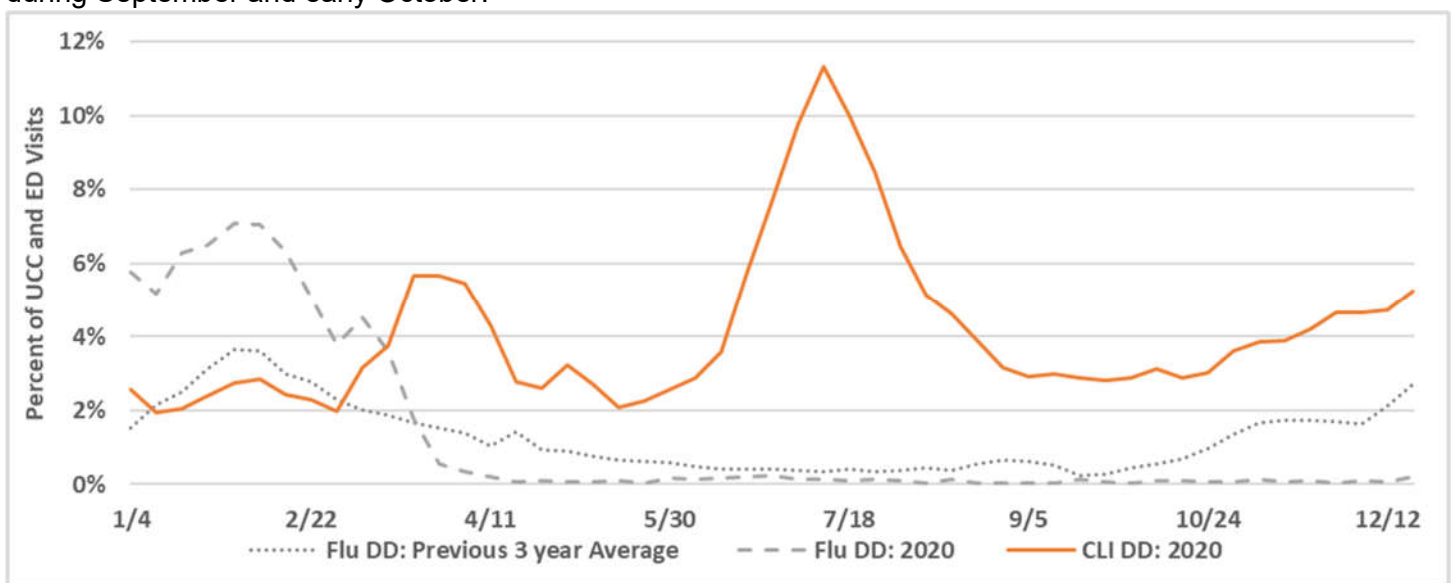


Fig 17. Percentage of Urgent Care Center (UCC), Hospital, and Emergency Department (ED) visits with a discharge diagnosis (DD) for influenza (flu) or COVID-like illness (CLI) in Hillsborough County, based on FL-ESSENCE reporting facilities, by reporting week. Visits remain well below the historical values for flu. **The percentage of visits for CLI are on a steady increase** from last week and remains higher than levels seen during September and early October.



DEATHS AND DEATH RATES

Important Note: COVID deaths are reported to DOH from a variety of sources including hospitals, Medical Examiners Offices and from the Vital Statistics database. The Vital Statistics Database Data is reported electronically and can have delays of 2-4 weeks from the date of death until the date reported. Data during this time frame should be assumed to be incomplete and is indicated by the shaded area in each graph below.

Fig 18. Daily COVID deaths reported by date of death over the past 90 days, based on Merlin case data and Vital Statistics Death data. Over the past 90 days, reported COVID deaths have averaged been between 2 – 4 per day, **deaths are currently stable but could change due to delays in reporting.**

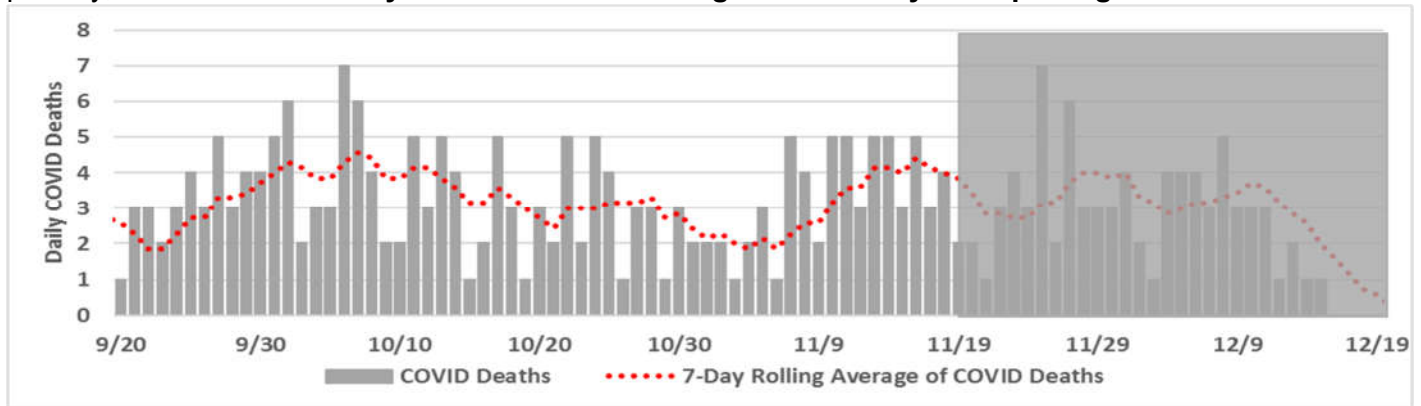


Fig 19. COVID 7-day rolling average death rate per 100,000 by race/ethnicity, for the past 90 days, based on Merlin case data and Vital Statistics Death data. Population data was acquired from FLHealth CHARTS. Cases with unknown race/ethnicity are excluded. Over the past 90 days, **death rates have been slightly decreasing across race/ethnicities.**

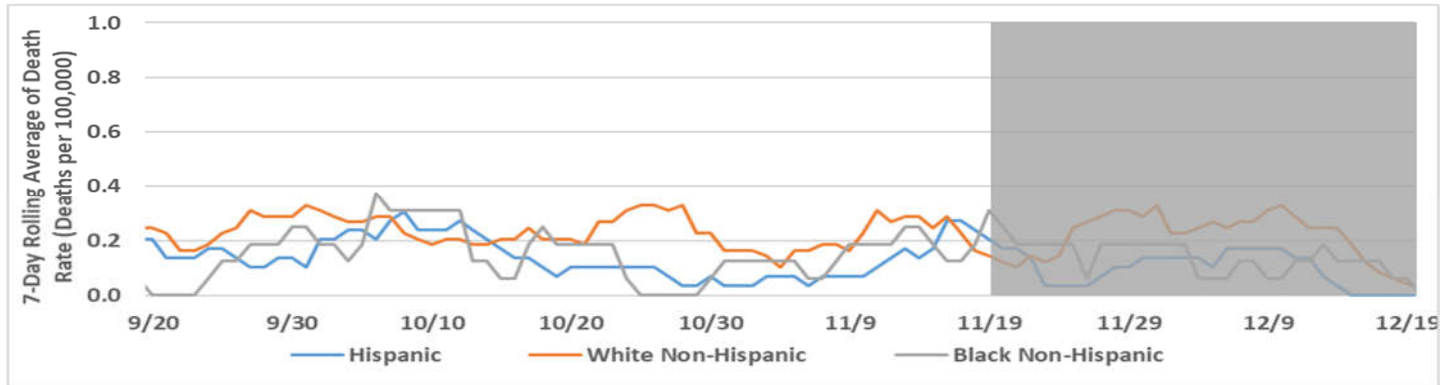


Fig 20. COVID Deaths associated with LTCFs as a percentage of all deaths, over the past 90 days, based on Merlin Data and Vital Statistics Death data. To date, 438 of the 1026 (43%) COVID deaths in Hillsborough County were associated with LTCFs. Recently, LTCF associated deaths have accounted for about 1 death/day.

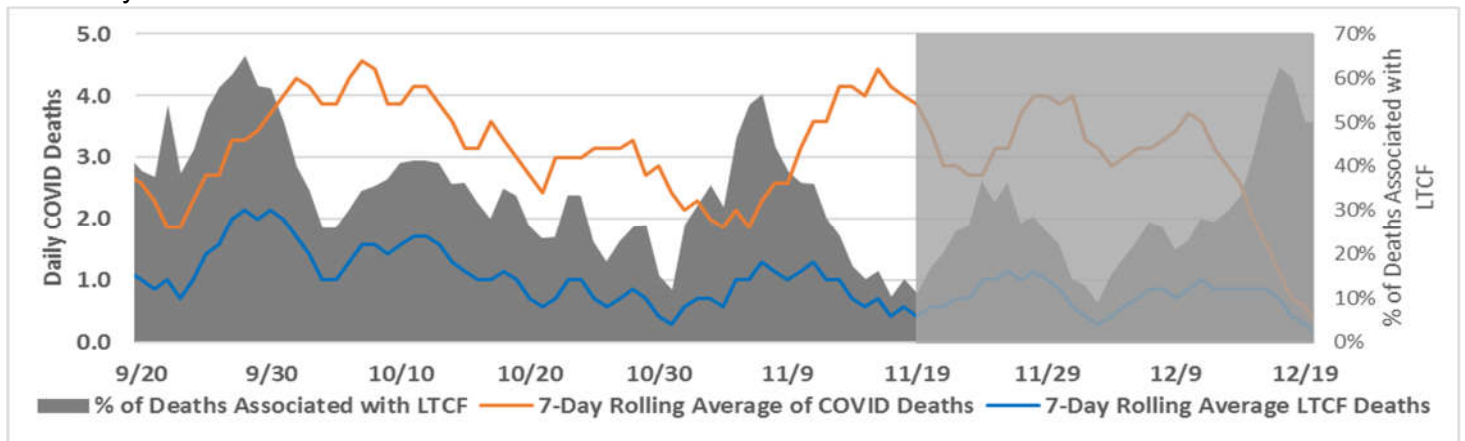


Fig 21. NEW for Week 51: COVID cases, deaths, case fatality rate, and mortality rates by gender, age group and race/ethnicity in Hillsborough County.

| Gender | Cases | Deaths | Case Fatality Rate | Mortality rate per 100,000 population |
|--------------|--------------|-------------|--------------------|---------------------------------------|
| Female | 36658 | 481 | 1.31% | 65.16 |
| Male | 32076 | 545 | 1.70% | 77.08 |
| Unknown | 680 | 0 | 0.00% | |
| Total | 69414 | 1026 | 1.48% | 70.99 |

| Age Group | Cases | Deaths | Case Fatality Rate | Mortality rate per 100,000 population |
|-------------|-------|--------|--------------------|---------------------------------------|
| 0-4 years | 1444 | 0 | 0.00% | 0.00 |
| 5-14 years | 3621 | 1 | 0.03% | 0.55 |
| 15-24 years | 12572 | 2 | 0.02% | 1.09 |
| 25-34 years | 13726 | 1 | 0.01% | 0.45 |
| 35-44 years | 10855 | 14 | 0.13% | 7.11 |
| 45-54 years | 10449 | 34 | 0.33% | 17.70 |
| 55-64 years | 7906 | 121 | 1.53% | 69.65 |
| 65-74 years | 4526 | 216 | 4.77% | 175.39 |
| 75-84 years | 2548 | 332 | 13.03% | 558.17 |
| 85+ years | 1327 | 305 | 22.98% | 1277.81 |
| Unknown | 440 | 0 | 0.00% | |

| Race | Cases | Deaths | Case Fatality Rate | Mortality rate per 100,000 population |
|---------|-------|--------|--------------------|---------------------------------------|
| White | 29812 | 675 | 2.26% | 62.88 |
| Black | 8436 | 165 | 1.96% | 63.98 |
| Other | 10702 | 146 | 1.36% | 128.29 |
| Unknown | 20464 | 40 | 0.20% | |

| Ethnicity | Cases | Deaths | Case Fatality Rate | Mortality rate per 100,000 population |
|--------------|-------|--------|--------------------|---------------------------------------|
| Hispanic | 19123 | 233 | 1.22% | 55.14 |
| Non-Hispanic | 27595 | 640 | 2.32% | 62.58 |
| Unknown | 22696 | 153 | 0.67% | |

Additional COVID surveillance data, visualizations and information can be found at the links below:

- Florida Department of Health Statewide COVID Dashboard: <https://experience.arcgis.com/experience/96dd742462124fa0b38ddedb9b25e429/>
- Hillsborough County COVID Dashboard: <https://www.hillsboroughcounty.org/en/residents/public-safety/emergency-management/stay-safe/covid-19-dashboard>
- Hillsborough County School District Dashboard: <https://hillsboroughschools.org/doc/2744/school-reopening-plan/frequently-asked-questions/coviddash/>

Additional notes about data sources and data collection for the charts and tables used in this report:

Merlin reportable disease database: Merlin serves as the state's repository of reportable disease case reports, including automated notification of staff about individual cases of high-priority diseases. Access to Merlin is available only to approved Department of Health employees. COVID data is entered in Merlin in multiple ways. Data fields associated with Electronic Lab Reports (ELRs) or electronic case reports will be auto populated when available. Additionally, specific to COVID cases, the Healthy Together APP allows for individuals to complete and report demographics, symptomology and other data elements to DOH. Case investigators and contact tracers also make attempts to interview each COVID case to collect or verify demographics and other important public health data. As the data is collected from case investigations the Merlin database will be updated. Some data elements, such as deaths and group care associations (Jails, LTCFs, and Schools) are reviewed by local and state staff for accuracy. Data within Merlin is considered provisional and is subject to change.

AHCA ESS Report: Florida's Agency for Health Care Administration (AHCA) requires all licensees providing residential or inpatient services to use the Emergency Status System (ESS) database for reporting its emergency status, planning or operations. In response to COVID the Agency added new reporting requirements related to COVID cases and hospitalizations at AHCA licensed facilities.

ESSENCE-FL: The Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) is a biosurveillance system that collects emergency department chief complaint data from participating hospitals and urgent care centers in Florida, call data from the Florida Poison Information Center Network, reportable disease data from the Merlin database, and mortality data from the Florida Office of Vital Statistics. The objective of this surveillance system is to provide the epidemiologist with the data sources and analytic tools needed to identify outbreaks or unusual trends more rapidly, leading to a timelier public health response.

FLHealth CHARTS: Powered by Florida's Bureaus of Community Health Assessment and Vital Statistics. CHARTS stands for Community Health Assessment Resource Tool Set, and compiles multiple datasets from a variety of agencies into a single source. Several data sources include Agency for Health Care Administration (AHCA), Florida Department of Health, Florida Department of Elder Affairs, Florida Department of Law Enforcement, and many others. A complete list of data sources can be found [here](#). Data queries such as population estimates, birth rates, death rates, marriage rates, and reportable disease statistics can be found using this tool.